



ABSTRACT OF THE DISCLOSURE

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3 This invention enables improved reception of ATSC terrestrial broadcast digital
4 television signals. ATSC DTV is a standard of the Advanced Television Systems
5 Committee (ATSC) for the terrestrial broadcast of digital television. ATSC DTV
6 broadcast signals are subject to impairment due to multipath. Improved radio reception
7 in multipath is possible when substantial reference components are transmitted as a
8 component of the transmitted radio. However, the introduction of new signal
9 components to the ATSC DTV broadcast signal represents a modification to the standard
10 which weaken the benefits of standardization. This invention resolves this dilemma by
11 carefully introducing data components into the data multiplex in a form compatible with
12 the ATSC DTV standard. Data components are chosen so as to induce a substantial
13 repeating reference component into the ATSC DTV modulation waveform. The induced
14 reference waveform enables clear reception in multipath while the integrity of the
15 standard is preserved.

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